Climate Change and Human Health Literature Portal

National Institute of Environmental Health Sciences

Seasonality and climatic associations with violent and nonviolent suicide: A population-based study

Abstract:

Background: Using 7-year population-based data on Taiwan, we examined seasonal variation in violent versus nonviolent suicide, and its association with meteorological factors: ambient temperature, relative humidity, atmospheric pressure, rainfall and daily sunshine hours. Methods: We used Taiwan's nationwide mortality data from 1997 to 2003, categorizing the sample decedents into two groups, violent (ICD-9-CM codes E953-E958) and nonviolent (E950-E952) suicide, based on the suicide method used. Seasonal autoregressive integrated moving average (SARIMA) modeling was used to detect seasonality of suicide, and the association of climate variables with violent versus nonviolent suicide. Results: The SARIMA test of seasonality was significant for both genders and the pooled sample (all $p < 0.001$) in violent suicide deaths, but not nonviolent suicides. Seasonal trends show a significant peak in March-May (early to late spring) for violent suicides. Increasing ambient temperature predicted increasing violent suicide rates. Conclusions: We conclude that seasonality exists in violent but not nonviolent suicide rates. Our findings suggest that suicide is a heterogeneous phenomenon and violent suicide may be more influenced by biochemical and chronobiological mechanisms. Copyright © 2008 S. Karger AG.

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Resource Description

Early Warning System: ⊠

resource focus on systems used to warn populations of high temperatures, extreme weather, or other elements of climate change to prevent harm to health

 A focus of content

Exposure : ⊠

weather or climate related pathway by which climate change affects health

 Meteorological Factors, Meteorological Factors, Precipitation, Solar Radiation, Temperature

  Temperature: Fluctuations

Geographic Feature: ⊠

resource focuses on specific type of geography

 Ocean/Coastal

Geographic Location: ☒

resource focuses on specific location

Non-United States

Non-United States: Asia

Asian Region/Country: Other Asian Country

Other Asian Country: Taiwan

Health Impact: ☒

specification of health effect or disease related to climate change exposure

Injury, Mental Health/Stress

Mental Health Effect/Stress: Mood Disorder

Mitigation/Adaptation: ☒

mitigation or adaptation strategy is a focus of resource

Adaptation

Model/Methodology: ☒

type of model used or methodology development is a focus of resource

Outcome Change Prediction

Resource Type: ☒

format or standard characteristic of resource

Research Article

Timescale: ☒

time period studied

Short-Term (

Vulnerability/Impact Assessment: ☒

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content